

We claim:

1. An aqueous, colloidal, freeze-resistant and storage-stable gas black suspension, comprising 2 – 30 wt.% gas black, 0 – 40 wt.% carbon black, a dispersion-supporting additive, a biocide and water, and having a zeta potential of less than 10 mV, a surface tension of greater than 50 mN/m and an average particle size of less than 200 nm.
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2. The aqueous, colloidal, freeze-resistant and storage-stable gas black suspension according to claim 1, wherein the dispersion-supporting additive is styrene-acrylic acid copolymer.
3. The aqueous, colloidal, freeze-resistant and storage-stable gas black suspension according to claim 2, wherein the styrene-acrylic acid copolymer is completely neutralized with
10 ammonium or alkali hydroxide.
4. The aqueous, colloidal, freeze-resistant and storage stable gas black suspension according to claim 1, wherein the zeta potential is less than –25mV.
5. The aqueous, colloidal, freeze-resistant and storage stable gas black suspension according to claim 1, wherein the surface tension is greater than 60 mN/m.
- 15 6. The aqueous, colloidal, freeze-resistant and storage stable gas black suspension according to claim 1, wherein the average particle size is less than 100 nm.
7. The aqueous, colloidal, freeze-resistant and storage stable gas black suspension according to claim 1, which has a pH of 6 to 12.
8. The aqueous, colloidal, freeze-resistant and storage stable gas black suspension according
20 to claim 1, wherein the gas black has an average primary particle size of 8 to 40 nm and a DBP value of 40 to 200 ml/100g.
9. The aqueous, colloidal, freeze-resistant and storage stable gas black suspension according to claim 1, wherein carbon black is present having an average primary particle size of 8 to 80 nm and a DBP value of 40 to 200 ml/100g.
- 25 10. The aqueous, colloidal, freeze-resistant and storage stable gas black suspension according to claim 1, wherein the biocide is present in an amount of 0.01 to 1 wt.%.

11. The aqueous, colloidal, freeze-resistant and storage stable gas black suspension according to claim 1, wherein the dispersion-supporting additive is present in an amount of 1 to 50 wt.% based on the total dispersion.

12. An aqueous, colloidal, freeze-resistant and storage-stable gas black suspension, consisting essentially of 2 – 30 wt.% gas black, 0 – 40 wt.% carbon black, a dispersion-supporting additive, a biocide and water, and having a zeta potential of less than 10 mV, a surface tension of greater than 50 mN/m and an average particle size of less than 200 nm.

13. The aqueous, colloidal, freeze-resistant and storage-stable gas black suspension according to claim 12, wherein the dispersion-supporting additive is styrene-acrylic acid copolymer.

10 14. The aqueous, colloidal, freeze-resistant and storage-stable gas black suspension according to claim 13, wherein the styrene-acrylic acid copolymer is completely neutralized with ammonium or alkali hydroxide.

15 15. An aqueous, colloidal, freeze-resistant and storage-stable gas black suspension, consisting of 2 – 30 wt.% gas black, 0 – 40 wt.% carbon black, a dispersion-supporting additive, a biocide and water, and having a zeta potential of less than 10 mV, a surface tension of greater than 50 mN/m and an average particle size of less than 200 nm.

16. The aqueous, colloidal, freeze-resistant and storage-stable gas black suspension according to claim 15, wherein the dispersion-supporting additive is styrene-acrylic acid copolymer.

17. The aqueous, colloidal, freeze-resistant and storage-stable gas black suspension according to claim 16, wherein the styrene-acrylic acid copolymer is completely neutralized with ammonium or alkali hydroxide.

20 18. The aqueous, colloidal, freeze-resistant and storage stable gas black suspension according to claim 1, which is free of wetting agents.

19. The aqueous, colloidal, freeze-resistant and storage stable gas black suspension according to claim 1, which is free of auxiliary agents for improving suspension properties.

25 20. A process for producing the aqueous, colloidal, freeze-resistant and storage-stable gas black suspension according to claim 1, comprising dispersing gas black and optionally the carbon black in water together with a dispersion-supporting additive and a biocide.

21. The process for producing the aqueous, colloidal, freeze-resistant and storage-stable gas black suspension according to claim 20, further comprising performing the dispersing with bead mills, ultrasonic devices, high-pressure homogenizers, a microfluidizer, or high intensity mixer.

5 22. A process of making an ink, inkjet ink, lacquer or printing ink formulation comprising adding the aqueous, colloidal, freeze-resistant and storage-stable gas black suspension according to claim 1 to said formulation.

23. An ink containing the aqueous, colloidal, freeze-resistant and storage-stable gas black suspension according to claim 1.

10 24. An ink, inkjet ink, lacquer or printing ink composition comprising the aqueous, colloidal, freeze-resistant and storage-stable gas black suspension according to claim 1.

25. An ink comprising the aqueous, colloidal, freeze-resistant and storage-stable gas black suspension according to claim 1 and an ink additive.